QUIVIRA NATIONAL WILDLIFE REFUGE
REHABILITATION OF OFFICE AND VISITOR CENTER
09-036

STATEMENT OF INITIAL PROGRAM REQUIREMENTS

1.0 GENERAL

The office addition shall be a single story, slab-on-grade building, of approximately 1,800 square feet. Building design shall comply with the codes designated in the Statement of Work. The building design shall incorporate energy conserving technology, recycled-content construction materials, and other sustainable building technology as described in the latest version of the LEED Green Building Rating System for New Construction and Major Renovations. Document the LEED points which can be obtained.
The requirements for spaces, materials, and processes described in this document are minimum requirements for the project. Modifications which result in better quality or higher performance may be made to these requirements.

2.0 SPATIAL REQUIREMENTS

2.01 NEW OFFICE ADDITION

In the new addition on the east side of the existing office provide the room layout as shown on the attached Schematic Floor Plan consisting of two offices with closets, open office space for modular furniture, a kitchen/break room, and mechanical room.

2.02 EXISTING BUILDING

In the existing building, demolish, remodel, and provide new construction as shown on the attached Existing Plan.

2.03 SITE

Remove trees, and relocate existing utility lines as required for construction. Fill and grade so ground elevation adjacent to the building is not lower than one foot below finish floor and slopes away from the building at a minimum 1/2 inch per foot, Provide sidewalks a minimum of 5 feet wide for accessible circulation around the building. Restore areas disturbed by construction.
Spoil disposal may be done on the Refuge, at a distance of approximately one mile from the construction site.

Compaction of backfill and embankment shall be to the following percentages of Standard Proctor (ASTM D698):

Below foundations	100%
Below floor slabs and paving	95%
Exterior wall backfill	95%
Overlot backfill	90%

3.0 BUILDING SYSTEMS, COMPONENTS, AND MATERIALS

3.01 FOUNDATION

Cast-in-place concrete foundation. Insulate outer surface with minimum 2-inch thick extruded polystyrene foam board from one inch below grade down to top of footing. All concrete work shall be done in accordance with applicable sections of the American Concrete Institute, Manual of Concrete Practice, and the Concrete Reinforcing Steel Institute, Recommended Practices.
Concrete mix design requirements: Minimum 3,000 p.s.i. compressive strength, maximum 0.49 water-cement ratio, air entrained, substitute fly ash for a percentage of Portland cement.

3.02 FLOOR

Concrete slab-on-grade with reinforcing, minimum 4 inch thickness, constructed over a gravel base course and vapor barrier.
Concrete mix design requirements: Minimum 3,000 p.s.i. compressive strength, maximum 0.49 water-cement ratio, substitute fly ash for a percentage of Portland cement.

3.03 EXTERIOR WALLS

2 x 6 wood stud framing, with plywood sheathing, air barrier membrane, minimum R-19, formaldehyde-free fiberglass batt insulation, and brick veneer. 5/8" gypsum wallboard on the interior surface.

3.04 ROOF

Design roof structure for following loads minimum, unless higher loads are specified by local code:

1.	Dead Load	10 psf
2.	Live Load	30 psf
3.	Wind Load	Basic wind speed of 90 mph, Exposure C
4.	Snow Load	25 psf
5.	Deflection	L/360
6.	Seismic Design Category	Calculate per ASCE 7-05

The structure supporting gypsum board ceilings shall have a deflection not exceeding 1/360. Roof trusses shall be manufactured and erected in accordance with specifications of the Truss Plate Institute, and the Wood Truss Council of America.
Insulate ceilings with minimum R-38 fiberglass batt insulation.

Roof deck shall be minimum 5/8" plywood sheathing. Provide bituminous underlayment along the eaves for a minimum distance of 24 inches inside the interior wall surface measured horizontally, and ASTM D 4869, Type IV underlayment on balance of roof.

ASTM D3018, Type I, fiberglass base, ceramic granule surface, 3-tab strip asphalt shingles, with self-sealing adhesive edges. UL 790 Class A fire resistance rating, minimum 60 m.p.h. wind resistance rating, minimum 25-year warranty. Color shall match shingles on the existing roof.

3.05 DOORS, WINDOWS, SKYLIGHTS

Exterior Doors: SDI-100 Level 3, Model 2, prime painted, polyurethane core, hardware reinforcements, and flush end closure treatment at head. Provide insulated glazing.

Interior Doors: Solid core, 3-0 x 7-0 x 1-3/4” thick, red oak veneer doors with clear finish. NWWDA I.S. 1A, custom grade.

Frames: Exterior, SDI-100, welded type, 16 gauge, prime painted; interior, red oak.

Locksets: Exterior doors, and office doors shall have locksets. Provide a 6-pin master key system with individual change keys for each office or locked room. Integrate new locks with existing keying system, or re-key the existing locks to function on the new masterkeying system. Minimum ANSI 156.2 series 4000, Grade 1 at exterior doors, and Grade 2 at interior doors, with lever handles.

Miscellaneous hardware: ANSI A8112 hinges. Wall-mounted door stops at all doors. Closers and weatherstripping with metal housing at exterior doors. Hardware finish ANSI/BHMA 626.

Windows: Clad wood, casement type. Glaze with minimum 3/4 inch dual-pane, argon-filled, tinted, low-E glazing. NAFS-01 C-30 performance level. Finish interior frame, sash, and wood sill with stain and clear finish.
Windows and similar openings in exterior walls shall be flashed with sill, jamb, and head flashings; door openings shall be flashed with head and jamb flashings.

3.06 FINISH CARPENTRY

All interior finish carpentry shall comply with Architectural Woodwork Institute, Quality Standards, Custom grade. Wood shall be red oak. Finish on all finish carpentry, interior wood doors, and wood casework shall be penetrating stain, sealer, and clear topcoats.

3.07 INTERIOR PARTITIONS AND CEILINGS

Interior partitions shall be 2x4 wood stud or 20 gauge metal stud framing, with sound insulation batts, and 5/8" gypsum board with GA 214 level 4 finish. All gypsum board installation shall be done in accordance with Gypsum Association specification GA-216. Interior partitions shall have solid blocking at mounting points of all casework, hardware, and specialty items.

Install 5/8" gypsum board on the underside of the roof trusses for the full ceiling area of the addition, with GA 214 level 2 finish where concealed and a level 4 finish where exposed. Install a vapor barrier between the heated and unheated portion of the ceiling/roof assembly.

Provide suspended acoustic ceiling in all rooms of the addition except Mechanical 5, which shall have exposed gypsum board ceiling. Acoustic panels shall be ASTM E1264 mineral fiber, non-directional, medium texture acoustical panel. 2' x 2', nominal 5/8 inch thickness, minimum .60 NRC, minimum .74 light reflectance, class A fire resistance, minimum 25% recycled content.

3.08 INTERIOR FINISHES

Finish paint all exposed surfaces except prefinished materials and equipment, consisting of a prime coat and two finish coats. Paint walls and ceilings with zero or low VOC, eggshell acrylic latex. Paint primed metal surfaces with acrylic latex or alkyd enamel. Paint bare wood with transparent oil stain and clear topcoats.

Provide nylon fiber carpet in all rooms of the addition except Break Room 4 and Mechanical 5. Pile weight: minimum 32 oz per square yard pile weight, Pile density: minimum 8228, Surface Flammability Ignition ASTM E648, Class 1, Smoke developed: ASTM E662, less than 450, maximum electrostatic charge: Less than 3.5 KV.

Provide Congoleum Duraceramic or equal on the floor of the Break Room 4, Work Room 8, Open Office 10, Lobby 17, and Display Area 18.

Provide oak base in all rooms.

Provide 1-inch, 0.80 inch thick mini blinds in all windows.

3.09 SPECIALTIES, FURNISHINGS, CASEWORK

Provide semi-recessed fire extinguisher cabinet with glazed door and minimum 2A-10BC extinguisher.

Provide base cabinets with doors and drawers, and wall cabinets, all with adjustable shelving and accessible pulls, for the full length of the east wall of Break Room 4.

Cabinet configuration shall meet accessibility requirements. Provide 18 inch deep, minimum 84 inch high storage cabinets with adjustable shelving on west wall of Break Room 4.

Cabinet style shall be reveal overlay. Body members shall be oak veneer with solid oak at exposed edges. Face frames and rails shall be solid oak. Countertops shall be plastic laminate. Construction shall meet or exceed requirements of AWI Section 1600. Provide reception desk in Visitor Contact 19. Desk shall be custom configuration to include work surface for a computer and telephone, drawers for office supplies, storage for brochures and handouts, and accessible dual-height reception counter.

3.10 HVAC

Water-to-air geothermal heat pump system to provide heating and cooling, and mechanical ventilation during building occupancy. Provide a heat pump for the new addition, and replace the existing gas-fired furnace and DX cooling system with a new heat pump in the existing mechanical room. Performance characteristics of the HVAC system shall meet or exceed the recommendations in the Climate Zone 4 Recommendation Table, an excerpt of the Advanced Energy Design Guide For Small Office Buildings, attached. Provide an electronic programmable thermostat for each of the new heat pumps. Geoexchange field installation and performance shall be documented on the attached Geoexchange System Start-up & Checkout form.

Other minimum requirements for the HVAC system include:
Provide two circulating pumps for geoexchange field fluid flow.
Provide extended media filters with minimum MERV 7 rating at all air handling equipment.
Insulate ductwork in attic spaces.
Insulate piping carrying liquids for HVAC systems.
Provide housekeeping pads under all HVAC units. Provide flowmeters, gauges, thermometers, humidistats, and other accessories required to monitor operation of hydronic systems.
Permanently label all HVAC units, pumps, and liquid lines.

At completion of HVAC installation, test and balance all forced air systems and heating/cooling water piping to provide design air flows.

3.11 PLUMBING

Break room sink shall be double basin, stainless steel, ADA compliant. Provide Reverse Osmosis water treatment unit for this sink, located in the adjacent Mechanical Room 5.
Provide exterior hose connections at two locations on the exterior wall of the addition.
Domestic water piping shall be copper, with insulation.
Water heater shall be instantaneous point-of-use type.
Provide prime-painted steel access panels for all valves concealed in walls or ceilings.
Sterilize the domestic water system after installation.

3.12 POWER

All electrical work shall be done by electricians licensed in the State of Kansas, in accordance with the National Electrical Code.
Provide distribution panel(s) loaded to maximum 80% capacity, with minimum four spare 20 amp breakers per panel. Provide disconnects at all hvac units, pumps, instantaneous water heaters, and at other equipment in accordance with the National Electrical Code.
Provide one duplex outlet on three walls of Offices 1 and 2, and a four-plex outlet on the other wall. Provide a four-plex outlet at 5 locations on the south wall of Open Office 3.
Provide recessed floor-mounted duplex outlet and data jacks in center of Work Room 8.
Provide four duplex outlets in Break Room 4. Provide specification grade wiring devices.
Run all conductors in conduit. Non-metallic sheathed cable and metallic flex cable shall not be acceptable.
Provide all materials to connect power from the point of termination of the local electric utility to the MDP for the building, including pads, conduits, conductors, grounding, meter blocks, and disconnects.
Permanently label panels, disconnects, etc.

3.13 LIGHTING

Surface or recessed mounted fluorescent fixtures for typical office areas as appropriate, minimum LER 62, with low-mercury T-8 lamps and electronic ballasts. Provide dual-level switching for fixtures in office areas and break room.
Provide exterior lighting fixture at the exterior door with photocell and motion sensor.

3.14 TELEPHONE, DATA, AND SPECIAL SYSTEMS

Provide a box with both a phone and data jack on three walls of Offices 1 and 2, on one wall of Break Room 4, and in the floor of Work Room 8. Provide a box with a phone and data jack at 5 locations on the south wall of Open Office 3. Provide conduit from phone/data boxes in office walls to the TTB or server as appropriate, or to an accessible point for pulling cable. Provide minimum Cat 6 cable for data and telephone lines.

Provide box and empty conduit in Break Room for future cable connection.

4.0 POST CONSTRUCTION REQUIREMENTS

At the conclusion of construction, but before final inspection, the contractor shall conduct building commissioning, by personnel qualified in electrical, HVAC, and plumbing systems, independent of the subcontractors and installers, to confirm that building systems have been properly constructed and function as intended by the design requirements.

After building commissioning is complete, the contractor shall provide training to Government personnel on all building equipment and systems.

Modify construction documents to produce as-built drawings, and submit these and Operation and Maintenance manuals for all equipment and systems.